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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,276	08/26/2003	Steven L. Schmidt	08500.7245-02000	2646

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EXAMINER

RONESI, VICKEY M

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/647,276	SCHMIDT ET AL.	
	Examiner	Art Unit	
	Vickey Ronesi	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-68 is/are pending in the application.
- 4a) Of the above claim(s) 45-68 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/16/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of the Group I (claims 28-44) in the reply filed on 12/8/2005 is acknowledged. The traversal is on the ground(s) that the claims in Group II are dependent on the method of Group I. This is not found persuasive because the inventions in Group II is distinct, regardless of their dependency on claim 1, as discussed in the Restriction Requirement mailed 10/7/2005.

The requirement is still deemed proper and is therefore made FINAL.

2. Note that the amendment filed 12/8/2005 is not in compliance since the claims of Group II (claims 45-68) should have the status identifier of withdrawn since they are non-elected. In the interest of compact prosecution, a first action on the merits is provided with the understanding that all future claim listing will have the correct status identifiers.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "3" in Figure 2 is not described in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in

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the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 37-39 and 41 are objected to because of the following reasons.

With respect to claim 41, the conjunctive term "and" is improper when used in an alternative expression, which claim 41 clearly contains.

With respect to claims 37-39, the term "the solid-stated polymer" lacks antecedent basis. Note that claim 28 only provides for "the step of solid-stating the polymer."

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 28-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al (US 6,239,210, cited on IDS dated 12/16/2004) in view of Pushee et al (US 4,392,804, cited on IDS dated 12/16/2004).

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Kim et al discloses an oxygen barrier and oxygen absorbing (i.e., oxygen scavenging) composition comprising a polyester, a blend of xylylene group-containing polyamide and at least about 49 ppm of a transition metal catalyst such as cobalt octoate (col. 10, lines 47-51; abstract), wherein the polyester is any thermoformable grade polyester grade with oxygen barrier qualities (col. 5, lines 6-16). While Kim et al does not teach trying of the resins, it is considered that it would have been well within the capabilities of one of ordinary skill in the art to dry the resins considering that they absorb moisture from the atmosphere and would require drying to quicken the process.

Kim et al fails to disclose a method step of heat treating a polymer by solid stating in a low oxygen environment.

Pushee et al discloses solid stating of PET and teaches that, in the manufacture of PET bottles, it is a requirement that high orientation is obtained which provides for a bottle having the necessary strength while permitting the use of a minimum amount of resin. To obtain such, solid stating in the presence of either a high vacuum (i.e., reduced pressure atmosphere) or an inert gas (i.e., inert gas atmosphere) such as nitrogen is used for up to 24 hours (Table bridging cols. 3 and 4), which would intrinsically aid in enhancing the oxygen-scavenging capability of the composition. A preferred vacuum is 0.1-0.5 mm of mercury (i.e., 13-67 N/m²) (col. 3, line 4).

Given that Kim et al teaches the use of polyester resins for use in bottles (col. 6, line 22; col. 8, line 47; col. 8, line 61) and further given that polyester utilized as bottle resins are subjected are conventionally subjected to solid stating as taught by Pushee et al, it would have been obvious to one of ordinary skill in the art to add a step of solid stating to the method of Kim et al to therefore increase oxygen scavenging performance by at least a factor of 1.3 and obtain a

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ratio of oxygen-scavenging rate under wet and dry conditions greater than 2:1, since a material and its properties are inseparable and thereby arrive at the presently claimed invention.

6. Claims 28-32 and 35-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al (US 6,239,210, cited on IDS dated 12/16/2004) in view of Burkett et al (US 5,539,078).

Kim et al discloses an oxygen barrier and oxygen absorbing (i.e., oxygen scavenging) composition comprising a polyester, a blend of xylylene group-containing polyamide and at least about 49 ppm of a transition metal catalyst such as cobalt octoate (col. 10, lines 47-51; abstract), wherein the polyester is any thermoformable grade polyester grade with oxygen barrier qualities (col. 5, lines 6-16). While Kim et al does not teach drying of the resins, it is considered that it would have been well within the capabilities of one of ordinary skill in the art to dry the resins considering that they absorb moisture from the atmosphere and would require drying to quicken the process.

Kim et al fails to disclose a method step of heat treating a polymer by solid stating in a low oxygen environment.

Burkett et al teaches that to produce crystallizable copolymers with high molecular weights and high melting points suitable for use as bottle resin, the resins are subjected to solid stating below the melting point of the polymer (e.g., 190-250 °C, col. 7, lines 26-28) in the presence of vacuum (i.e., reduced pressure atmosphere) or a nitrogen purge (i.e., inert gas atmosphere), which would intrinsically aid in enhancing the oxygen-scavenging capability of the composition.

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Given that Kim et al teaches the use of polyester resins for use in bottles (col. 6, line 22; col. 8, line 47; col. 8, line 61) and further given that polyester utilized as bottle resins are subjected are conventionally subjected to solid stating as taught by Burkett et al, it would have been obvious to one of ordinary skill in the art to add a step of solid stating to the method of Kim et al to therefore increase oxygen scavenging performance by at least a factor of 1.3 and obtain a ratio of oxygen-scavenging rate under wet and dry conditions greater than 2:1, since a material and its properties are inseparable at the presently cited claims.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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vr



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